

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the present application.

1-19 (Withdrawn)

20. (Original) A process for producing useful products from organic materials comprising the steps of:

providing an aqueous solution containing organic materials;

contacting said aqueous solution with a gas comprising ozone, said ozone being contacted with said aqueous solution at a concentration of at least 0.01 ppm., said ozone being present in an amount sufficient to oxidize at least a portion of said organic materials into an oxidized medium;

contacting said ozonated aqueous solution with a material selected from the group consisting of an organism, an enzyme, and mixtures thereof for converting said oxidized medium into a metabolic product; and

collecting said product.

21-23 (Withdrawn)

24. (Original) A process as defined in claim 20, wherein said aqueous solution is contacted with said ozone by flowing said aqueous solution through a venturi and feeding said ozone into said venturi.

25. (Withdrawn)

26. (Withdrawn)

27. (Original) A process as defined in claim 20, wherein said ozonated aqueous solution is contacted with a bacteria and wherein said metabolic product comprises a hydrocarbon gas.

28. (Original) A process as defined in claim 27, wherein said hydrocarbon gas comprises methane.

29. (Original) A process as defined in claim 27, wherein said bacteria comprises a bacteria chosen from the group of methanogenic bacteria and wherein said hydrocarbon gas comprises methane.

30. (Currently Amended) A process as defined in claim 24 20, wherein the oxidized medium comprises an alcohol and wherein the process further comprising the steps of:

6. contacting said alcohol with an organism for converting said alcohol into a hydrocarbon gas; and

~~collecting said hydrocarbon gas.~~

31. (Original) A process as defined in claim 30, wherein said hydrocarbon gas contains methane.

32. (Original) A process as defined in claim 31, wherein said ozonated aqueous solution is contacted with a material selected from the group consisting of a plant, a microorganism, and mixtures thereof to produce said alcohol, and wherein said microorganism used to produce said methane comprises a bacteria selected from the group of methanogenic bacteria.

33. (Original) A process as defined in claim 20, wherein said organic materials comprise food industry waste.

34. (Original) A process as defined in claim 20, wherein said organic materials comprise animal waste.

35. (Original) A process as defined in claim 20, wherein said organic materials comprise paper industry waste.

36. (Original) A process as defined in claim 20, wherein said organic materials comprise petroleum refining waste.

37. (Original) A process as defined in claim 20, wherein said organic materials comprise tire waste.

38. (Original) A process as defined in claim 20, wherein said organic materials comprise municipal solid waste.

39. (Original) A process as defined in claim 20, wherein said product comprises a material selected from the group consisting of aldehydes, ketones, alkanes, alkenes, alkynes, lipids, peroxides, and pigments.

40-43 (Withdrawn)

44. (Original) A process for producing methane from waste materials comprising of steps of:

providing an aqueous solution containing organic compounds;

contacting said aqueous solution with a gas comprising ozone, said ozone being present in an amount sufficient to convert at least a portion of said organic compounds into an oxidized medium;

contacting said ozonated aqueous solution with microorganisms, said microorganisms converting said oxidized medium into methane; and

collecting said methane.

45. (Original) A process as defined in claim 44, wherein said aqueous solution is contacted with said ozone by flowing said aqueous solution through a venturi and feeding said ozone into said venturi.

46. (Original) A process as defined in claim 44, further comprising the steps of:

monitoring the amount of metabolizable substrates in said aqueous solution during ozonation; and

ozonating said aqueous solution until the amount of said metabolizable substrates detected begins to decrease.

47. (Original) A process as defined in claim 44, further comprising the steps of:

calculating a maximum amount of metabolizable substrates that may be produced during ozonation of said aqueous solution based upon the amount and type of organic compounds contained in said solid waste materials; and

contacting said aqueous solution with ozone in an amount sufficient to produce at least said calculated maximum amount.

48. (Original) A process as defined in claim 46, wherein said metabolizable substrates comprise sugars.

49. (Original) A process for producing a useful product from waste materials comprising the steps of:

providing an aqueous solution containing organic materials;

contacting said aqueous solution with a gas comprising ozone, said ozone being present in an amount sufficient to oxidize and break down at least a portion of said organic materials into an oxidized medium;

drying and collecting said oxidized medium.

50. (Original) A process as defined in claim 49, wherein said oxidized medium comprises a fertilizer.

51. (Original) A process as defined in claim 49, further comprising the step of removing inorganic solid materials from said aqueous solution prior to collecting said oxidized medium.